

REMARKS

Applicant has thoroughly considered the Examiner's remarks in the August 10, 2007 Office action and has amended the application to more clearly set forth the invention. This Amendment B amends claim 1. Claims 1-47 are thus presented in the application for further examination. Reconsideration of the application as amended and in view of the following remarks is respectfully requested.

Claim rejections under 35 U.S.C. §112, second paragraph

Claims 1-47 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Office rejects claims 1-47 for omitting an element of the apparatus that measures or outputs a physiological parameter value in the physiological volume.

Applicant has amended independent claim 1 to clarify that the claimed apparatus analyzes parameters in a volume comprising a plurality of substances. Accordingly, claim 1 includes at least the essential elements for analyzing parameters in a volume. In particular, claim 1 includes a first signal source representative of a first substance and a second signal source representative of a second substance comprising the volume. In addition, claim 1 includes a first detector to measure a quantity of the first signal representing the first substance or a signal representing the volume, and a second detector to measure a quantity of the signal representing the second substance. As such, the detectors analyze the first substance or volume and the second substance in order to determine a concentration of the second substance.

Thus, Applicant submits that independent claim 1 complies with 35 U.S.C. §112. Additionally, Applicant submits that claims 2-47, which depend from independent claim 1, are patentable for at least the same reasons as claim 1. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §112 be withdrawn.

Claim rejections under 35 U.S.C. §101

Claims 1-47 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. In particular, the Office asserts that the elements of the apparatus in claims 1-47 manipulate numeric values within the claimed signals $A(t)$, $B(t)$, $B'(t)$, $C'(t)$, $V'(t)$, and $N_V(t)$ with no practical use for the resulting signals/values. Applicant respectfully disagrees with the Office's assertion and submits that claims 1-47 are directed to patentable subject matter.

Applicant points out that a claimed invention is directed to statutory subject matter when it "'transforms' an article or physical object to a different state or thing" or "otherwise produces a useful, concrete and tangible result." The present invention produces a useful, concrete, and tangible result by quantifying an analyzed substance and generating signals representative of the quantified substance for determining the concentration of the substance.

In particular, amended claim 1 is directed to an apparatus analyzing the parameters in a volume comprising a plurality of substances. The apparatus includes a first detector for measuring the quantity of a signal representing of a first substance comprising the volume or of the entire volume. Similarly, the apparatus includes a second detector for measuring the quantity of a signal representing a second substance comprising volume. As recited by claim 1, "the measured signals are transferred into electro optical signals by a signal converter and sent into a data processor ... for determining **the concentration of the second substance** with respect to the first substance or . . . for determining **the concentration of the second substance** with respect to the volume." This determined concentration constitutes a tangible result and not merely a manipulated numeric value.

Thus Applicant submits that independent claim 1 is patentable under 35 U.S.C. §101. Additionally, Applicant submits that claims 2-47 which depend on independent claim 1 are patentable for at least the same reasons as claim 1. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §101 be withdrawn.

Conclusion

Applicant submits that the claims are allowable for at least the reasons set forth herein. Applicant thus respectfully submits that claims 1-47 as presented are in condition for allowance and respectfully request favorable reconsideration of this application.

Although the prior art made of record and not relied upon may be considered pertinent to the disclosure, none of these references anticipates or makes obvious the recited aspects of the invention. The fact that Applicant may not have specifically traversed any particular assertion by the Office should not be construed as indicating Applicant's agreement therewith.

Applicant wishes to expedite prosecution of this application. If the Examiner deems the application to not be in condition for allowance, the Examiner is invited and encouraged to telephone the undersigned to discuss making an Examiner's amendment to place the application in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency or overpayment of any required fee during the entire pendency of this application to Deposit Account No. 19-1345.

Respectfully submitted,

/Robert M. Bain/

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